MODIS TECHNICAL TEAM MEETING

July 15, 1999

Bob Murphy chaired the MODIS Technical Team Meeting. Present were Bill Barnes, Francesco Bordi, Barbara Conboy, Wayne Esaias, Steve Kempler, Gene Legg (NOAA), Ed Masuoka, Mike Roberto, and Eric Vermote, with Deborah Howard recording the minutes.

1.0 SCHEDULE OF EVENTS

SAFARI Program Implementation Meeting (Gabarone, Botswana)	July 26–30, 1999
Next PI Processing Meeting (GSFC)	September 8, 1999
Terra Launch Vandenberg Air Force Base	No earlier than September 13, 1999
AGU 1999 Fall Meeting (San Francisco, CA)	December 13–17, 1999
IGARRS 2000 Abstracts Due	December 1999
AGU 2000 Spring Meeting (Washington, DC)	May 30–June 3, 2000
IGARRS 2000 (Honolulu, HI)	July 24–28, 2000
EOS-PM Launch	December 2000

2.0 MINUTES OF THE MEETING

2.1 Instrument Report

Roberto reported a special test designed to better understand the alignment changes between the cold focal planes begins today and will take about a week; the thermal vacuum test is expected to be completed on about July 30. Additionally, SBRS is using an Integration and Alignment Collimator (IAC) test to examine a band-to-band registration problem and another test to examine some differences in the bin widths for the analog-digital converters (ADC).

Murphy added that we expect to have a clear understanding about whether the alignment problem is a SRCA or an instrument problem in a few days. The potential impact of a misregistration on the science will need to be determined; it would only affect those data products that use data from both the hot and cold focal planes. The cloud mask will be impacted, and how it is utilized by other algorithms could be impacted. Murphy said that the plan for the extra week for

the thermal vacuum test is designed to find out all that we can about the above issues. At the completion of the thermal vacuum testing we will analyze the impact on the science; we should have enough information to begin discussing these issues at the upcoming Discipline Leaders meeting on July 29, 1999.

Esaias asked about the status of the RVS test and about considering adding more time to the thermal vacuum testing to recheck RVS. Barnes said the tests on the impact of registration would not take long. Murphy and Esaias agreed that if thermal testing were to extend to a protracted time, then we could reconsider a request to recheck RVS.

Murphy verified with Roberto that the above issues concerning FM1 would not be of concern for PFM.

2.2 L1 Integration

Bordi reviewed highlights of the MODIS L1 Integration status dated July 15 (Attachment 1). He reported plans to use L1B PGE02, version 2.1.6 in MOSS-2 and to deliver version 2.2.1, the at-launch version, to SDST on Aug 26. Kempler asked when version 2.2.1 would get to the DAAC. Masuoka said he would let him know; the delivery date to the GDAAC will be defined next week.

Bordi reported that Level 1A and Geolocation (PGE01) development has been done for some time and that the DAAC has promoted it to Ops. Cloud Mask (PGE03) is scheduled to be promoted to Ops by September 1. Kempler asked about PGE 55 status. Masuoka said that PGE55 is still being developed. Although it is not an at-launch PGE, SDST would like to incorporate that ESDT now.

Next, Bordi summarized the MODIS Level 1 Integration Issues discussed at the MODIS Working Group on L1 Integration yesterday (see Attachment 1). For issue #2 regarding the schedule for resolution of ECS problems at the DAAC, Mike Moore (ESDIS) updated the schedule. It is listed in the comments section of the Issues list (see Attachment 1). For issue #3 regarding ECS generation of an ESDT for the L1A subsetter (PGE71), Moore will provide a date when the ESDT will be available. Issue #4 regarding the at-launch version of L1B PGE02 has been resolved. Version 2.2.1 will be the at-launch version. For issue #6 to establish a date for DAAC testing with ECS release 5A (EGS 10), Kempler said he would send the information to Bordi today.

2.3 SDST

Masuoka said he attended the recent MOSS-2 planning meeting and that the problem with production failures when fractured data were received during the MOSS-2 dry run would not be completely resolved in time for the MOSS-2 test. He reported plans to provide a patch with a much lower failure rate. He believes that they can tolerate a few failures in an 8-hour shift. Masuoka said that he asked if MOSS-2 should be delayed. The planning group agreed that they do not want to delay it; after MOSS-2 there are plans to retire version 4PY and replace it with version 5A. Murphy commented that one of the concerns from previous MOSS-2 dry runs was repeated failures from fractured data flows and asked

whether we should expect similarly fractured data in MOSS-2. He asked when we would get reliable testing if this does not get fixed. Masuoka said that first we need to see if the same problem occurs in version 5A. Kempler suggested that we need alternate solutions within and outside of ECS; he asked about a backup. Kempler and Masuoka took an action item to discuss the resolution of the above issues with Moore. As an addendum to the minutes, Kempler said that a patch would be implemented to solve the Data Server problem.

Masuoka reviewed the Launch Ready PGE Status dated 7/15/99 (Attachment 2). He said that PGE01 version 2.1.1 has been completed. Although adding DPREP functionality to Level 1A would speed up geolocation and make L1A and geolocation more robust; this would be done in the next delivery. Murphy asked about fixing DPREP. Masuoka replied that the problem is not with DPREP, but with the DPREP toolkit and fixing the toolkit would be very time consuming. He said that sea ice daily was stalled for a long time, some rework is required that is being worked on again.

Esaias noted that to do a Level-3 day, 3 days of data are needed to exercise the day-to-day options around the dateline. He asked whether these options are being exercised. Masuoka said he would check on this. A brief discussion regarding whether to use version 5A or 4PY followed.

2.4 GDAAC

Kempler reviewed the status of upcoming testing and subsequently detailed the status as follows. He said the EOS Ground System 10 (EGS 10) test is scheduled for August 23 and that it includes exercising Drop 5A. The GDAAC plans to start data flow with a life feed from their input sources (e.g., EDOS) and end with data going to the science teams. Depending how the SIPS interface is working, the DAAC also intends to see higher products return to the DAAC. Murphy asked Kempler whether it is GDAAC's decision to adjust the date for the EGS 10 in order to make the test more useful. Masuoka said the EGS 10 is an independent test. Kempler added that it is a GES DAAC test that the DAAC can execute as most sensible and logical. In other words moving the date would be a GES DAAC decision. Kempler noted that although limited, all the testing the GDAAC has been performing has been providing data to a place that MODAPS can pull it from. This has been happening fairly regularly. So, to the extent that MODAPS is involved with EGS 10, all data produced from EGS 10 will be available for MODAPS to pull. However, coordination between MODAPS and the DAAC is needed.

Kempler reported that the following DAAC action items were taken at the MODIS Working Group on L1 Integration held yesterday, July 14, 1999. One action item for the Goddard DAAC is to develop a schedule for PGE tests with Drop 5A. These dates are contingent on the system behaving and assumes that Drop 5A Epsilon will be installed and fully checked out in TS1 (the SSIT testing) on August 6. Another assumption is that Drop 5A contains the ESDTs needed for PGE03, v2.4.1 and ingest functionality to ingest NISE and ESDTs needed to support PGE71. This action includes:

- Regression test PGE01, v2.1.0 and promote it into Drop 5A Epsilon OPS mode

on August 18.
- Regression test PGE02, v2.1.5 and promote it into Drop 5A Epsilon OPS mode on August 20.
- Test PGE03, v2.4.1 and promote it into Drop 5A Epsilon OPS on August 31. This action assumes that the ESDTs and Ingest functionality needed to support PGE03 are in Drop 5A Epsilon.
- Regression test PGE02A, v2.3.0 and promote it into Drop 5A Epsilon OPS mode on August 23.
- Test PGE71 and have it ready for promotion into Drop 5A Epsilon on September 15. This action assumes that the ESDTs needed to support PGE71 are in Drop 5A Epsilon.

A second DAAC action item is to schedule a date for PGE2A promotion. This action is contingent upon PGE02A, v2.3.0 being ready for promotion into Drop 4PY.07 on July 23. A third action is for the DAAC to schedule (start days) for 5A installation and formal tests at GDAAC. Kempler explained that TS1 is where the DAAC begins SSIT. Dates include:
- 5A in TS2 – July 19
- MOSS-II (4PY) – July 26
- 5A in TS1 – August 2
- 5A in OPS – August 9
- ORE for 5A – August 16
- EGS 10 for 5A – August 23

A fourth action is to contact Glenn Iona to secure 17 days worth of data from EDOS for the extended joint test of GDAAC and MODAPS in September.

2.5 PI Processing

Vermote said the PI Processing meeting held on Tuesday, July 13 went very well. The breakout session on versioning was surprisingly harmonious and included representatives of the Atmosphere, Land, and Oceans disciplines, SDST, and MCST. Wolfe will update the white paper to summarize the versioning discussion. No PI Processing meeting is scheduled for August; the next one is planned for September 8, 1999.

Vermote said he had talked with Justice, who is concerned about the potential misregistration problem; they will wait for more solid results on this issue over the next 2 weeks. Murphy commented that we will have some more solid results early next week. He said he would ask how cloud mask affects the other disciplines and that he would like reactions from the disciplines at the upcoming Discipline Leaders meeting.

The Land group is working on high resolution processing on a small basis and they may be changing the nominal production scenario. Vermote said he would talk about potential changes at the Discipline Leaders meeting. Murphy suggested that we may need an additional geolocation for each focal plane if coregistration turns out to be a problem. Vermote showed those present a sample of a Land surface temperature data image.

2.6 Oceans

Esaias reported that the Oceans group is proceeding on the scheduled October cruise. Minnett may add more people to the cruise; Voss may not go because it is not an initialization activity.

2.7 NOAA

Masuoka said there are problems with the time ordering of data packets and with missing data in the rate buffer. This is where NOAA's bent-pipe system obtains its data. He asked Gene Legg how the bent-pipe system is working. Legg replied that they are getting data from the buffer. Masuoka said it could be problematic if it was out of time order by more than a scan. However, it may not matter if it is in real time.

Murphy asked Legg about the status of the NOAA invitation for MODIS representatives to participate in NOAA advisory panels and about how NASA people will be integrated into the review process. Legg said he would check on this and report back to the MODIS Technical Team.

2.8 MODIS Web Pages

Murphy suggested that the MODIS team re-examine the MODIS home page and the DAAC page on the Web and give feedback to the DAACs and the Technical Team.

3.0 ACTION ITEMS

3.1 New Action Items

1. Masuoka and Kempler: Discuss with Mike Moore the resolution of issues regarding production plan failures at the DAAC when fractured data are received from EDOS and related ECS/DAAC issues.

2. Legg: Find out when and how NASA MODIS representatives will be integrated into the NOAA review process and report on status to the MODIS Technical Team. NOAA has agreed to have MODIS representatives serve on the NESDIS data product review boards. However, MODIS representatives have not yet been invited to participate in an advisory panel.

3.2 Action Items Carried Forward

1. Discipline Leaders and Support Team Leaders: Inputs for the EOS Data Products Handbook PM-1 Vol. 2 are due to Barbara Conboy by May 24, 1999.

Status: This item remains open. Murphy has not yet received input from Townshend. Conboy is incorporating corrections received from the MODIS Team to-date and awaiting final corrections/input from Bob Murphy. Also, the data flow chart does not need to be updated.

2. Hohner and Howard: Develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress.

Status: This item is in progress. Hohner has added a Latest News section to the MODIS home page and has developed a template for the creation of more news pages. The development of the MODIS Instrument News database and Web interface will add functionality to updating and developing related news pages. The development and review of the database and interface mechanism is expected by mid-August with updates to the Latest News pages added on an ongoing basis. In the interim, new news items and pages are welcomed and encouraged. To add a news item or a news page, please contact Michael Hohner at mhohner@pop900.gsfc.nasa.gov or 301-614-6539.

3. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

4. Barnes: Work with Wayne Esaias to complete the written and vugraph versions of the Oceans Validation Plan.

Status: This action item remains open. Esaias has submitted the narrative version of the Oceans Validation Plan to Michael King. The vugraph version is pending.

3.3 Closed Action Items

1. Murphy: Create a mechanism for coordinating MODIS operations and other schedules that includes an interactive listing. It should be more than a passive posting of schedules on the World Wide Web. Such an interactive schedule could be used by MODIS science discipline teams to coordinate field campaigns or by the operations group to coordinate MODIS activities with the other Terra instruments' activities.

Status: This action is being fulfilled through Hohner's and Howard's action item to develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress (see item 2 above in Action Items Carried Forward).